

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION
(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

| | |
|--|---|
| Date of mailing: 03 August 2000 (03.08.00) | |
| International application No.: PCT/EP00/00689 | Applicant's or agent's file reference: UDG,002-PCT |
| International filing date: 27 January 2000 (27.01.00) | Priority date: 28 January 1999 (28.01.99) |
| Applicant: BIENVENUT, Willy, Vincent et al | |

1. The designated Office is hereby notified of its election made:

in the demand filed with the International preliminary Examining Authority on:

20 June 2000 (20.06.00)

in a notice effecting later election filed with the International Bureau on:

2. The election was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

| | |
|---|---|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35 | Authorized officer: J. Zahra Telephone No.: (41-22) 338.83.38 |
|---|---|

PATENT COOPERATION TREATY

PCT

REC'D 01 SEP 2000

WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|---|--|---|
| Applicant's or agent's file reference UDG,002-PCT | FOR FURTHER ACTION | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No. PCT/EP00/00689 | International filing date (day/month/year) 27/01/2000 | Priority date (day/month/year) 28/01/1999 |
| International Patent Classification (IPC) or national classification and IPC G01N33/52 | | |
| Applicant UNIVERSITE DE GENEVE et al. | | |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p> | | |
| <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application | | |

| | |
|--|--|
| Date of submission of the demand 20/06/2000 | Date of completion of this report 30.08.00 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 | Authorized officer Hoekstra, S Telephone No. +31 70 340 2847 |



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/00689

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-31 as originally filed

Claims, No.:

1-21 as originally filed

Drawings, sheets:

1/9-9/9 as originally filed

2. The amendments have resulted in the cancellation of:

the description, pages:
 the claims, Nos.:
 the drawings, sheets:

3. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/00689

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|------|-------------|
| Novelty (N) | Yes: | Claims 1-21 |
| | No: | Claims |
| Inventive step (IS) | Yes: | Claims 1-21 |
| | No: | Claims |
| Industrial applicability (IA) | Yes: | Claims 1-21 |
| | No: | Claims |

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/00689

Re Item V

Reasoned statement under Article 33(1)-(4) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

The present claims are considered to meet the requirements of Article 33(1) - (4) PCT.

The Closest prior art is DE4408034 which discloses a method for the mass-spectrometric (MALDI) analysis of 2-D gel electrophoretic protein samples involving transferring proteins, preferably via electroblotting, via a hydrophilic membrane (PVDF) to a matrix membrane suitable for MALDI analysis. In specific embodiments the proteins are enzymatically cleaved during the transfer of the proteins to the matrix (equivalent to the one-step digestion transfer (OSDT) in the prior art acknowledgement of the description).

The claimed invention (claims 10-21) differs in that it is limited to embodiments in which (proteolytic) cleavage of the sample proteins occurs for a first time in the gel and a second time on the hydrophilic membrane on which a second cleaving reagent is immobilised.

Present claim 10 appears to solve the underlying technical problem of providing an improved OSDT process known in the art by introducing a further digestion step. It could not be contemplated from the state of the art that the results, i.e. allowing analysis of strongly basic proteins and large MW proteins, could be obtained by introducing the second digestion step.

Claims 1-10 refer to kits limited to the presence of the two digestive reagents, one of which is immobilised to a hydrophilic membrane, and to the presence of the two membranes needed to perform the invention (one hydrophilic, one hydrophobic). These kits are needed to perform the invention and as such follow the fate of the method claims.

Re Item VII

Certain defects in the international application

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/00689

The description does not meet the requirements of Rule 5.1(a)(ii) PCT because it does not mention and briefly discuss DE4408034. Instead the application refers to unpublished documents (Page 2, lines 12-19; Cf. Preliminary Examination Guidelines, Chapter II, 4.17 and 4.17a).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|---|--|
| Applicant's or agent's file reference UDG,002-PCT | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/EP 00/00639 | International filing date (day/month/year) 27/01/2000 | (Earliest) Priority Date (day/month/year) 28/01/1999 |
| Applicant UNIVERSITE DE GENEVE et al. | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. Certain claims were found unsearchable (See Box I).

3. Unity of invention is lacking (see Box II).

4. With regard to the title,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

1

None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 00/00689

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 GO1N33/52 GO1N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 GO1N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | DE 44 08 034 C (BRUKER FRANZEN ANALYTIK GMBH) 13 July 1995 (1995-07-13) abstract column 7, line 68 -column 8, line 5 claims 5-12 | 1-21 |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

12 May 2000

Date of mailing of the International search report

24/05/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patenttaan 2
NL - 2230 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3018

Authorized officer

Hoekstra, S

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/00689

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--------------------------|--------------------------|
| DE 4408034 C | 13-07-1995 | GB US | 2287315 A,B 5595636 A | 13-09-1995 21-01-1997 |

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

| | | |
|---|-----|--|
| To: Lucas, Brian R. LUCAS & CO 135 Westhall Road Worthingham Surrey CR6 9HJ GRANDE BRETAGNE | PCT | |
|---|-----|--|

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

| | | |
|--|--|--|
| Date of mailing (day/month/year) | 30.08.00 | |
| Applicant's or agent's file reference UDG,002-PCT | IMPORTANT NOTIFICATION | |
| International application No. PCT/EP00/00689 | International filing date (day/month/year) 27/01/2000 | Priority date (day/month/year) 28/01/1999 |
| Applicant: UNIVERSITE DE GENEVE et al. | | |

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

| | | |
|--|---|--|
| Name and mailing address of the IPEA/ European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 | Authorized officer Cardenas, C Tel. +31 70 340-3370 | |
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

| | | |
|---|--|---|
| Applicant's or agent's file reference UDG,002-PCT | FOR FURTHER ACTION | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No. PCT/EP00/00689 | International filing date (day/month/year) 27/01/2000 | Priority date (day/month/year) 28/01/1999 |
| International Patent Classification (IPC) or national classification and IPC G01N33/52 | | |
| Applicant UNIVERSITE DE GENEVE et al. | | |
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application | | |
| Date of submission of the demand 20/06/2000 | Date of completion of this report 30.08.00 | |
| Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3018 | Authorized officer Hoekstra, S Telephone No. +31 70 340 2847 | |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/00689

I. Basis of the report

1. This report has been drawn on the basis of (substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.);

Description, pages:

1-31 as originally filed

Claims, No.:

1-21 as originally filed

Drawings, sheets:

1/9-9/9 as originally filed

- 2. The amendments have resulted in the cancellation of:**

the description, pages:

the claims, Nos.:

the drawings. sheets:

3. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c));

- 4. Additional observations, if necessary:**

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/00689

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|------|-------------|
| Novelty (N) | Yes: | Claims 1-21 |
| | No: | Claims |
| Inventive step (IS) | Yes: | Claims 1-21 |
| | No: | Claims |
| Industrial applicability (IA) | Yes: | Claims 1-21 |
| | No: | Claims |

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/00689

R Item V

Reasoned statement under Article 33(1)-(4) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

The present claims are considered to meet the requirements of Article 33(1) - (4) PCT.

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The claimed invention (claims 10-21) differs in that it is limited to embodiments in which (proteolytic) cleavage of the sample proteins occurs for a first time in the gel and a second time on the hydrophilic membrane on which a second cleaving reagent is immobilised.

Present claim 10 appears to solve the underlying technical problem of providing an improved OSDT process known in the art by introducing a further digestion step. It could not be contemplated from the state of the art that the results, i.e. allowing analysis of strongly basic proteins and large MW proteins, could be obtained by introducing the second digestion step.

Claims 1-10 refer to kits limited to the presence of the two digestive reagents, one of which is immobilised to a hydrophilic membrane, and to the presence of the two membranes needed to perform the invention (one hydrophilic, one hydrophobic). These kits are needed to perform the invention and as such follow the fate of the method claims.

Re Item VII

Certain defects in the international application

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/00689

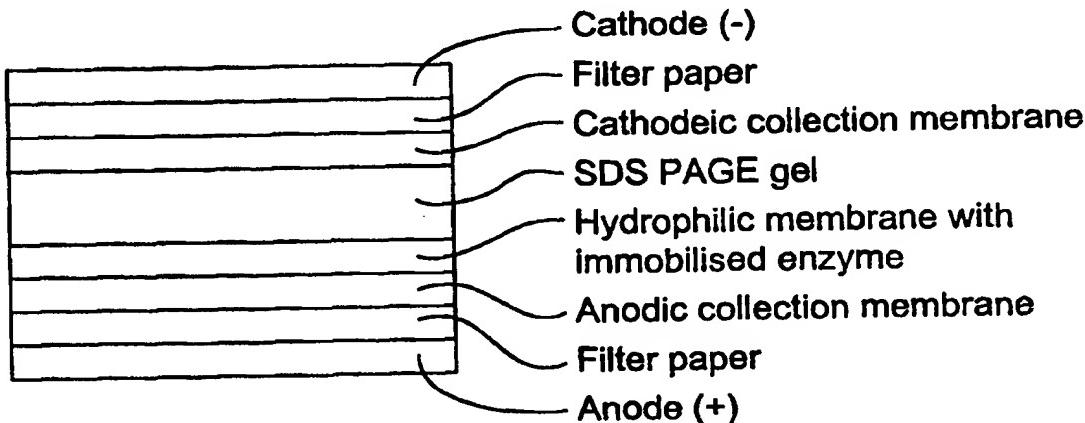
The description does not meet the requirements of Rule 5.1(a)(ii) PCT because it does not mention and briefly discuss DE4408034. Instead the application refers to unpublished documents (Page 2, lines 12-19; Cf. Preliminary Examination Guidelines, Chapter II, 4.17 and 4.17a).



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| | | |
|--|-----------|---|
| (51) International Patent Classification ⁷ : G01N 33/52, 33/68 | A1 | (11) International Publication Number: WO 00/45168 (43) International Publication Date: 3 August 2000 (03.08.00) |
| <p>(21) International Application Number: PCT/EP00/00689</p> <p>(22) International Filing Date: 27 January 2000 (27.01.00)</p> <p>(30) Priority Data: 9901775.8 28 January 1999 (28.01.99) GB 9907790.1 7 April 1999 (07.04.99) GB </p> <p>(71) Applicant (<i>for all designated States except US</i>): UNIVERSITE DE GENEVE [CH/CH]; Rue General-Dufour 24, Case Postale, CH-1211 Geneva (CH).</p> <p>(72) Inventors; and (75) Inventors/Applicants (<i>for US only</i>): BIENVENUT, Willy, Vincent [FR/FR]; 4 Route Des Mauds, F-17460 Thénac (FR). HOCHSTRASSER, Denis, Francois [CH/CH]; Chemin de la Savonnière, Collonge-Bellerive, CH-1245 Geneva (CH). SANCHEZ, Jean-Charles [CH/CH]; Chemin Frank-Thomas 42, CH-1208 Geneva (CH).</p> <p>(74) Agent: LUCAS, Brian, Ronald; Lucas & Co., 135 Westhall Road, Warlingham, Surrey CR6 9HJ (GB).</p> | | <p>(81) Designated States: AU, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> </p> |

(54) Title: METHOD AND KIT FOR IDENTIFYING OR CHARACTERISING POLYPEPTIDES



(57) Abstract

Polypeptides which have been separated by gel electrophoresis can be identified or characterised by a procedure which has two main stages. In the first stage the gel is digested with a polypeptide-cleaving agent such as an enzyme. This produces mainly large fragments which, in the second stage are electroblotted through a hydrophilic membrane on which is immobilised another polypeptide-cleaving reagent such as an enzyme onto a hydrophobic member, typically a membrane, e.g. of PVDF. The resulting fragments, usually peptides, are identified, preferably by MALDI-TOF MS, or a property may be determined, e.g. by interaction with an antibody.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

| | | | | | | | |
|----|--------------------------|----|---------------------------------------|----|---|----|--------------------------|
| AL | Albania | ES | Spain | LS | Lesotho | SI | Slovenia |
| AM | Armenia | FI | Finland | LT | Lithuania | SK | Slovakia |
| AT | Austria | FR | France | LU | Luxembourg | SN | Senegal |
| AU | Australia | GA | Gabon | LV | Latvia | SZ | Swaziland |
| AZ | Azerbaijan | GB | United Kingdom | MC | Monaco | TD | Chad |
| BA | Bosnia and Herzegovina | GE | Georgia | MD | Republic of Moldova | TG | Togo |
| BB | Barbados | GH | Ghana | MG | Madagascar | TJ | Tajikistan |
| BE | Belgium | GN | Guinea | MK | The former Yugoslav Republic of Macedonia | TM | Turkmenistan |
| BF | Burkina Faso | GR | Greece | ML | Mali | TR | Turkey |
| BG | Bulgaria | HU | Hungary | MN | Mongolia | TT | Trinidad and Tobago |
| BJ | Benin | IE | Ireland | MR | Mauritania | UA | Ukraine |
| BR | Brazil | IL | Israel | MW | Malawi | UG | Uganda |
| BY | Belarus | IS | Iceland | MX | Mexico | US | United States of America |
| CA | Canada | IT | Italy | NE | Niger | UZ | Uzbekistan |
| CF | Central African Republic | JP | Japan | NL | Netherlands | VN | Viet Nam |
| CG | Congo | KE | Kenya | NO | Norway | YU | Yugoslavia |
| CH | Switzerland | KG | Kyrgyzstan | NZ | New Zealand | ZW | Zimbabwe |
| CI | Côte d'Ivoire | KP | Democratic People's Republic of Korea | PL | Poland | | |
| CM | Cameroon | KR | Republic of Korea | PT | Portugal | | |
| CN | China | KZ | Kazakhstan | RO | Romania | | |
| CU | Cuba | LC | Saint Lucia | RU | Russian Federation | | |
| CZ | Czech Republic | LI | Liechtenstein | SD | Sudan | | |
| DE | Germany | LK | Sri Lanka | SE | Sweden | | |
| DK | Denmark | LR | Liberia | SG | Singapore | | |
| EE | Estonia | | | | | | |

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 00/00689

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N33/52 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | DE 44 08 034 C (BRUKER FRANZEN ANALYTIK GMBH) 13 July 1995 (1995-07-13) abstract column 7, line 68 -column 8, line 5 claims 5-12 ----- | 1-21 |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

12 May 2000

Date of mailing of the international search report

24/05/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Hoekstra, S

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/00689

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|---------------------------|--------------------------|
| DE 4408034 C | 13-07-1995 | GB US | 2287315 A, B 5595636 A | 13-09-1995 21-01-1997 |

PATENT COOPERATION TREATY

PCT/IB/00/00000

From the INTERNATIONAL BUREAU

PCT

**NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES**

(PCT Rule 47.1(c), first sentence)

| | | | |
|---|--|--|--|
| Date of mailing (day/month/year) 03 August 2000 (03.08.00) | | | |
| Applicant's or agent's file reference UDG,002-PCT | | IMPORTANT NOTICE | |
| International application No. PCT/EP00/00689 | International filing date (day/month/year) 27 January 2000 (27.01.00) | Priority date (day/month/year) 28 January 1999 (28.01.99) | |
| Applicant UNIVERSITE DE GENEVE et al | | | |

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU,JP,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
EP

Priority

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 03 August 2000 (03.08.00) under No. WO 00/45168

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

| | |
|---|------------------------------------|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | Authorized officer J. Zahra |
| Facsimile No. (41-22) 740.14.35 | Telephone No. (41-22) 338.83.38 |

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

INFORMATION CONCERNING ELECTED OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

To:
 LUCAS, Brian, Ronald
 Lucas & Co.
 135 Westhall Road
 Warlingham, Surrey CR6 9HJ
 ROYAUME-UNI

Date of mailing (day/month/year)
 03 August 2000 (03.08.00)

Applicant's or agent's file reference
 UDG,002-PCT

IMPORTANT INFORMATION

| | | |
|-------------------------------|--|--------------------------------|
| International application No. | International filing date (day/month/year) | Priority date (day/month/year) |
| PCT/EP00/00689 | 27 January 2000 (27.01.00) | 28 January 1999 (28.01.99) |

Applicant
 UNIVERSITE DE GENEVE et al

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

EP :AT,BE,CH,CY,DE,DK,ES,FI,FR,GB,GR,IE,IT,LU,MC,NL,PT,SE
 National :AU,JP,US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

None

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland

Authorized officer:

J. Zahra

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